

survival, compared with platinum-based chemotherapy, in a retrospective observational series in which patients received RT with either concomitant platinum-based chemotherapy or cetuximab as definitive (48%) or adjuvant (52%) treatment for locally advanced cSCC of head and neck.^[10]

Acne-like rash is one of the more serious side effects of cetuximab therapy.^[20]

Erlotinib, another EGFR inhibitor, increases local control in cSCC with RT,^[21] as does gefitinib.^[22]

12.8.2.3.2 Vismodegib

Vismodegib is approved by the Australian Therapeutic Goods Administration for the treatment of basal cell carcinoma (BCC). It targets the hedgehog signalling pathway (which is upregulated in 90% of BCCs) and acts as a cyclopamine-competitive antagonist of the smoothened, frizzled class receptor (SMO).

Vismodegib shrinks BCCs.^[23] Case reports have documented that, when combined with RT and surgery, vismodegib treatment can make BCC resectable^[24] or amenable to being encompassed in an RT field,^[25] or even achieve durable and acceptable stable disease.^{[26][27][28]}

Vismodegib is particularly helpful for the treatment of patients with naevoid BCC (Gorlin's syndrome), in which RT is generally avoided because it can predispose to more in-field BCCs.

Vismodegib is also effective in RT-induced BCC^[29] and those who have progressed through RT.^[30]

Side effects can be significant, and include dysgeusia (distortion of the sense of taste) and new cSCCs.^[31]

12.8.2.3.3 Other radiotherapy modalities

Proton and neutron therapies may also improve therapeutic ratio in locally advanced skin cancer by achieving greater conformality.^[32]

A recent matched pair analysis reported that the outcomes of brachytherapy were equivalent to those of Mohs micrographic surgery in the treatment of early-stage KC.^[33]

Unsealed-source brachytherapy is being trialled. Rhenium-188 as a topical therapy requires only one or two applications.^{[34][35]}

12.8.3 References

1. Mattes MD, Zhou Y, Berry SL, Barker CA. *Dosimetric comparison of axilla and groin radiotherapy techniques for high-risk and locally advanced skin cancer*. Radiat Oncol J 2016 Jun;34(2):145-55 Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27306779>.
2. ↑ [Jump up to:2.0 2.1](#) Santos DE, Green JA, Bhandari N, Hong A et al. *Tangential Volumetric Modulated Radiotherapy - A New Technique for Large Scalp Lesions with a Case Study in Lentigo Maligna*. Int J Bioautomation 2015 Jan 1;Volume 19, Number 2, 2015, pp. 223-236(14) Available from: